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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,883	03/18/2004	Yoshinori Yoshida	Q80489	5194
23373	7590	01/14/2008	EXAMINER	
SUGHRUE MION, PLLC			TRAN, THAO T	
2100 PENNSYLVANIA AVENUE, N.W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20037			1794	
			MAIL DATE	DELIVERY MODE
			01/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/802,883

Applicant(s)

YOSHIDA ET AL.

Examiner

Thao T. Tran

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 13-15 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-6, 13-15 and 19-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/04/2007 has been entered.
2. Claims 1-6, 13-15, 19-28 are currently pending in this application. Claims 1, 3, 19-22, 26-28 have been amended.
3. In view of the prior Office action, the claim objection and the 112 rejections of the claims have been withdrawn due to the Amendments made thereto. However, the prior art rejections of the claims are maintained as set forth below.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-5, 13, 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skinner et al. (US Pat. 4,342,793).

Skinner discloses curing resins comprising a reactive diluent, a polyol, and a polyisocyanate that are cured both by radiation and heat (abstract). Monofunctional reactive diluents include conventional acrylic monomers (col. 5, lines 36-43). The coatings are applied to substrates, thus suggesting backing layers (col. 9, lines 64-68). Since the reactants are the same

as those claimed by the applicant and since the coatings are cured by heat and radiation to form interpenetrating networks, it is the examiner's position that the coatings of the invention would possess the claimed initial elastic modulus properties.

Skinner further discloses that the amount of radiation necessary to cure the reactive diluent depends on the thickness of the coating to be applied and the amount of reactive diluent in the coating composition (see col. 10, ln. 32-34). Therefore, it would have been obvious to one of ordinary skill in the art that the thickness of the coating would have been adjusted depending upon user's preference and intended use. Moreover, it is noted that the claimed thickness of 10 to 500 microns is a wide range that would cover the thickness of coating conventionally used in the art.

Regarding the method, the examples show that the polyurethane, polyols, and acrylate monomers are mixed together, coated, irradiated, and thermally cured (at least example 3). Since the polyol and isocyanate monomers would react upon mixing, the reference teaches the claimed process of reacting the components to form a mixture of a polyurethane and a vinyl monomer, coating the mixture, and irradiating the coating. The final thermal cure serves to fully cure the components.

Regarding the "cleaning sheet for removing foreign matter adhering on a tip of a probe needle of a probe card" limitations, it is noted that this is an intended use for the sheet. It is the examiner's position that the coatings of the invention would be capable of wiping debris from a probe needle since it is a solid surface and more specifically because it contains the claimed materials.

With respect to the limitation, "said cleaning layer contains no additives", it is noted that Skinner does not teach the use of an abrasive, the reference thus meets the requirement of this limitation.

With respect to the limitation, "is adapted to receive probe needles", it is the examiner's position that the coatings of the Skinner invention would be capable of being adapted to having the presently recited functions because the coatings are solid surfaces and more specifically because they contain the same claimed materials.

6. Claims 1-5, 13, 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grube (US Pat. 6,817,052).

Grube discloses a cleaning sheet for removing debris from probe tips (see abstract), the cleaning sheet comprising an outer surface layer 302 on roller 204 attached to a support arm 202. The outer surface 302 comprises a combination of polymeric materials, such as urethane and acrylic (see col. 7, ln. 10-23). The cleaning sheet can be multilayered and adhered to roller 204 by adhesive (see col. 8, ln. 29-41).

Although Grube is silent with respect to the thickness of the coating, it would have been obvious to one of ordinary skill in the art that the thickness of the coating would have been adjusted depending upon user's preference and intended use. Moreover, it is noted that the claimed thickness of 10 to 500 microns is a wide range that would cover thicknesses conventionally used in the art.

Grube further discloses that arm 202 supports sticky roller 204 and/or an abrasive roller or other surface (see col. 12, ln. 56-57), indicating that the outer surface 302 of roller 204 may be free of abrasive, thus meeting the requirements of the presently claimed invention. In addition,

with respect to the newly added limitation, "said cleaning layer contains no additives", Grube also teaches that the cleaning pad can be made from a material having the substantially similar hardness to that of probe (see col. 9, ln. 1-20), the cleaning pad of the reference would not have additives or in an amount that would deteriorate the probe needle.

The reference also discloses that the tips of the probes can go into the cleaning pad (see col. 9, ln. 1-20), thus meeting the requirement of the newly added limitation of the probe tip penetrating the cleaning sheet. Furthermore, with respect to the newly added limitation, "is adapted to receive probe needles", it is noted that this limitation is not positively recited. And it is the examiner's position that the outer surface 302 of Grube would be capable of being adapted to having the presently recited functions because the coatings of the reference are solid surfaces and more specifically because they contain the same claimed materials.

7. Claims 3-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grube as applied to claims 1-2 and 5 above, in view of Skinner et al.

Grube is as set forth in claims 1-2 and 5 and incorporated herein.

Grube does not specifically teach the polyurethane being formed from a polyol and a polyisocyanate, or that the polymeric mixture being cured by radiation.

Skinner applies as above, teaching polyurethane coating resins that form improved tough and hard coatings on various substrates (abstract). The coatings are formed essentially free from solvent emission and are fully crosslinked (col. 2 lines 64-68). Thus, it would have been prima facie obvious to use the coatings of Skinner's invention as the binder resins of the Grube invention to provide hard, fully crosslinked coatings having improved toughness and solvent emission.

Response to Arguments

8. Applicant's arguments filed on 12/04/2007 have been fully considered but they are not persuasive.

Since Applicants' arguments are substantially the same as before, the same responses are reiterated herein in addition to a new response.

In response to Applicants' arguments that neither reference teaches that the cleaning sheet containing no additives or in an amount that would deteriorate the probe needle, it is noted that in both Skinner and Grube, no abrasive additive is used. Thus the references meet the requirement of the cleaning sheet having no additives or in an amount that would deteriorate the probe needle.

With respect to Applicants' argument that neither reference teaches the cleaning sheet "adapted to receive probe needles", it is noted that in Grube the tips of the probes can go into the cleaning pad (see col. 9, ln. 1-20), thus meeting the requirement of the presently claimed invention. In addition, since the coatings of the references are solid surfaces and more specifically because they contain the same claimed materials, they would inherently be capable of being adapted to receive penetrating probe needles and remove the impurities on the tip of the needles without allowing the debris re-adhering to the needles again.

In response to Applicants' arguments that the coating layer of Grube and Skinner are cured and thus having a tough outer layer that would prevent penetration by a probe, it is noted that the presently claimed invention is also directed to a radiation cured layer, which would impart the same functions and properties as taught by Grube and Skinner.

Thus, Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Contact Information

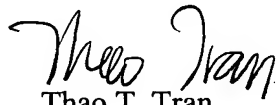
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton I. Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/802,883
Art Unit: 1794

Page 8

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Thao T. Tran
Primary Examiner
Art Unit 1794

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